Electroposicionador PI-998

DESCRIPTION



The intelligent positioner PI998 is designed to operate pneumatic valve actuators and can be operated from control systems, controllers or PC-based configuration and operation tools such as the FDT/DTMs or VALcare™. The enhanced functionalities of the PI998 Intelligent Valve Positioner enable a significant reduction in commissioning time and reduction of the total installation cost.
The new device offers an improved control performance with or without external accessories such as volume boosters for optimal efficiency of your process. The modular design makes maintenance simpler, and the advanced technology increases the total life time of the device.

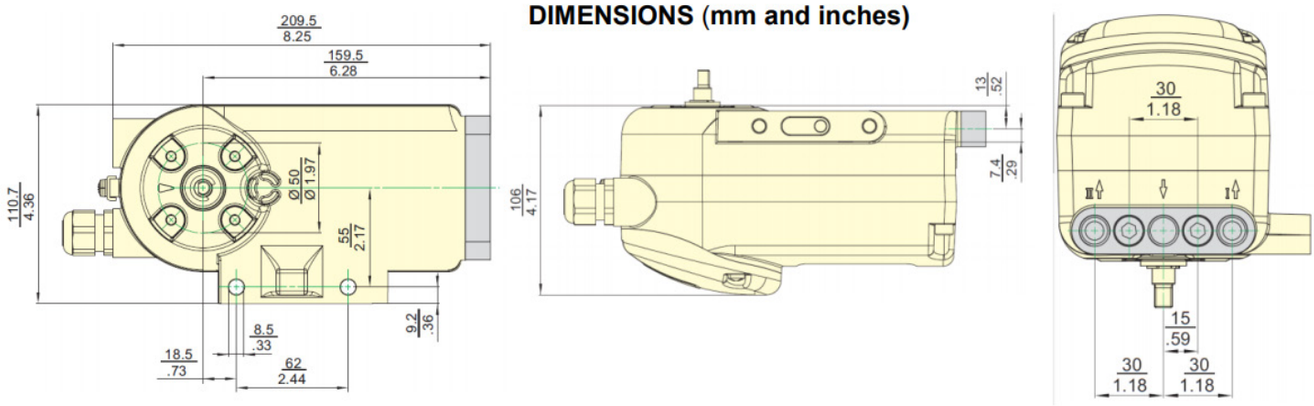
MAIN FEATURES



- Auto-start with self-calibration.
- Self diagnostics, status- and diagnostic messages.
- Easy local operation with the rotary selector.
- User-friendly interface with an extra-large Multi-Lingual full text graphical LCD.
- With HART® 7 communication.
- Stroke from 8 to 260 mm (0.3 to 10.2 in) with standard lever; larger stroke with special lever
- Improved control algorithm for best valve performance.
- Best control performance and unbeatable stability due to its IP converter technology.
- Controlled air consumption, not only for increased energy savings but also reduces exposure of the IP converter to damaging particles.
- 2 stages of built-in filters for air supply for further protection of the internal pneumatic parts.
- Angle range up to 95 ° angle
- Mounting onto any linear or rotary actuator
- Supply air pressure up to 6 bar (90 psig)
- Single or double-acting
- Protection class IP 66 and NEMA 4X
- Explosion protection: Intrinsic Safety according to ATEX / IECEx, INMETRO, NEPSI,...

OPTIONS:
Mechanical limit switches.
Communication / Modem / DTM (VALcare™ and HART USB Modem).
Booster relay.
Connection manifold with gauges.

DIMENSIONS (mm and inches)



TECHNICAL DATA	
INPUT SIGNAL	
Input signal range	4...20 mA. Two wire system
Operating range	3.6 to 21.5 mA
Input signal voltage limits	DC 12...36 V (unloaded)
Load	420 Ohms, 8.4 V at 20 mA
Input impedance	Z=320 Ohms for ac voltage 0.5 to 10kHz with < 3 dB non-linearity
Communication	HART® 7
AIR SUPPLY	
Supply air pressure	1.4 to 6 bar (20 to 87 psig)
Output to actuator	0 to ~100% of the air supply pressure (up to 5.5 bar at 6 bar air supply pressure)
Air supply [1]	According to ISO 8573-1: Solid particle size and density class 2; Oil rate class 3
PNEUMATIC PERFORMANCE – AIR FLOW	
Single acting	To pressurize actuator: B0S: 4 Nm3/h at 1.4 bar; 7 Nm3/h at 3 bar; 14 Nm3/h at 6 bar
	To vent actuator: B0S: 2.7 Nm3/h at 1.4 bar; 5 Nm3/h at 3 bar; 10 Nm3/h at 6 bar
Double acting	To pressurize actuator: C0S: 3.5 Nm3/h at 1.4 bar; 5 Nm3/h at 3 bar; 10 Nm3/h at 6 bar
	To vent actuator: C0S: 2.5 Nm3/h at 1.4 bar; 3.75 Nm3/h at 3 bar; 7.5 Nm3/h at 6 bar
PNEUMATIC PERFORMANCE – AIR CONSUMPTION [2]	
Single acting	For 0% of input signal: B0S: <0.1 Nm3/h at 1.4 bar; <0.1 Nm3/h at 3 bar; <0.1 Nm3/h at 6 bar
	For 100% of input signal: B0S: 0.175 Nm3/h at 1.4 bar; 0.250 Nm3/h at 3 bar; 0.400 Nm3/h at 6 bar
Double acting	For 0% of input signal: C0S: <0.1 Nm3/h at 1.4 bar; <0.1 Nm3/h at 3 bar; <0.1 Nm3/h at 6 bar
	For 50% of input signal: C0S: <0.215 Nm3/h at 1.4 bar; 0.335 Nm3/h at 3 bar; 0.570 Nm3/h at 6 bar
	For 100% of input signal: C0S: 0.175 Nm3/h at 1.4 bar; 0.250 Nm3/h at 3 bar; 0.400 Nm3/h at 6 bar
TRAVEL RANGE	
Stroke range	8 to 260 mm (with standard feedback levers; special levers on request)
Rotation angle range	Up to 95º angle without mechanical stop

RESPONSE CHARACTERISTIC [3]	
Sensitivity	< 0.1% of travel span
Non-linearity	< 0.6% of travel span
Hysteresis	< 0.3% of travel span
Air supply dependence	< 0.1% / 1 bar
Temperature effect	< 0.3% / 10 K
PHYSICAL SPECIFICATIONS	
Weight	Single acting (B0S): ~2.1 kg
	Double acting (C0S): ~2.3 kg
Materials	Housing and cover: Aluminium (Alloy No. 230) polyester powder coated
Ambient temperature	-40 to 80 ºC (-40 to 185 ºC)
Protection class	IP 66 / NEMA 4X
Pneumatic connection	1/4-18 NPT or G 1/4
Electrical connection	M20x1.5 or 1/2 NPT (made with an adaptor)

1) The use of a P10 filter regulator for air supply of the positioner is strongly recommended. It reduces the maximum pressure to the actuator and ensures that it is constant.

2) Measured according to ANSI / ISA-75.13.01-2013.

3) Data measured according to VDI/VDE 2177 and IEC 61514-2, with a 90º angle rotary actuator.

Note: For further product specification data, consult factory.